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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/557,527	11/21/2005	Hajrudin Ceric	2003P00701WOUS	2004

22116 7590 09/12/2008  
SIEMENS CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
170 WOOD AVENUE SOUTH  
ISELIN, NJ 08830

EXAMINER
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VERDIER, CHRISTOPHER M

ART UNIT	PAPER NUMBER
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3745

MAIL DATE	DELIVERY MODE
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09/12/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/557,527	<b>Applicant(s)</b> CERIC ET AL.	
	<b>Examiner</b> Christopher Verdier	<b>Art Unit</b> 3745	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 2, 2008 has been entered.

With regard to claim 11, Applicant's argument that German Patent 39 26 556 does not suggest use of a first hydraulic piston element to exert the first force in the first direction and a second hydraulic piston element to exert the second force in the second direction is not persuasive. Noting the ninth paragraph of the partial English translation of DE 3,926,556, a source of oil pressure is provided. The third to last paragraph indicates that there are shoes 118 on the opposite side of surface 8 with corresponding piston cylinder units 16 which contain corresponding pistons 28. It is clear that the hydraulic fluid from the source of oil pressure is connected to generate the first and second forces with hydraulic fluid acting on the pistons of the first and second elements, and includes a first flow path extending to pistons in the first element and a second flow path extending to pistons in the second element, since there must be two flowpaths to each of the pistons in the first and second elements for the assembly to operate. Further, the third to last paragraph indicates that there is a first hydraulic piston element which exerts the first force in the first direction and a second hydraulic piston element to exert the second force in the second direction.

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With regard to the rejection of claim 20 under 35 U.S.C. 102(b) as being anticipated by Swearingen 3,828,610 (figure 1), Applicant has argued that the thrust bearings 14, 15 are not pistons just because they are moveable axially in chamber 11a. This argument is not persuasive, because these elements are in the shapes of pistons and are axially displaced, thus they meet the definition of a piston. Concerning Applicant's argument that the components 12b, 13b or 22, 23 in Swearingen 3,828,610 are not restrictors in a hydraulic system for axially displacing the rotor wherein the displacement speed of the rotor is limited by a restrictor arranged in the flow path, this argument is not persuasive. Elements 12b, 13b or 22, 23 in the form of restrictors are arranged in fluid flow path between the hydraulic piston arrangement and the hydraulic system and function to limit the displacement speed of the rotor.

With regard to the rejection of claim 19 under 35 USC 103(a), which Applicant states is rejected based in part on the disclosure of Arvidsson 4,915,510, Applicant has argued that claim 19 is amended to recite that the hydraulic system is fluidically connected by a fluid flow path to both of the hydraulic piston arrangements, to generate forces for displacing the rotor in each of the different directions. Applicant has further argued that the combination as now claimed is different than anything taught or suggested by the references, and that while Arvidsson discloses bearings which work like pistons, the text explains that these are controlled by a servo valve in contact with the axle so that pressure in the cylinders is adjusted in response to changes in the position of the axle. These arguments are not persuasive. Arvidsson discloses a hydraulic system 4-9 fluidically connected by a fluid flow path through valve 8 to both hydraulic piston arrangements 2, 3, to generate forces for displacing the rotor in each of the different directions.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-12 and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by German Patent 39 26 556. Disclosed is a shaft bearing assembly 10 for axially mounting a rotor 2 and for selective movement of the rotor along a thrust axis of the rotor, comprising a bearing body 12/14 having first and second opposing track sides (the left and right sides), the first track side positionable along the axis and adjacent a first stop surface (near 20) on the rotor to transfer a first force in a first direction along the thrust axis, the second track side positionable along the axis and adjacent a second stop surface (analogous to 20 on the right side of the rotor) on the rotor to transfer a second force in a second direction along the thrust axis, the second direction being opposite the first direction, a first hydraulic piston element 28 positionable in the bearing body to exert the first force in the first direction and against the first stop surface, a second hydraulic piston element 28 positionable in the bearing body to exert the second force in the second direction and against the second stop surface (note that pistons are provided on both the left and right sides), the first and second elements each comprising a plurality of hydraulic pistons, each piston operatively positioned in a piston chamber 32 to effect one of the first or second forces, operation of the first and second elements enabling displacement of the rotor

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along the first or second direction from a first operating position into a second operating position, a hydraulic system (not shown) connected to generate the first and second forces with hydraulic fluid acting on the pistons of the first and second elements, the hydraulic system including a first flowpath extending to pistons in the first element and a second flow path extending to pistons in the second element, wherein to limit displacement speed of the rotor, restrictors 40 are positioned in the first flow path. A restrictor 40 is formed in the first flow path and a restrictor 40 is formed in the second flow path by forming a flow constriction in the second flow path. Noting the ninth paragraph of the partial English translation of DE 3,926,556, a source of oil pressure is provided. The third to last paragraph indicates that there are shoes 118 on the opposite side of surface 8 with corresponding piston cylinder units 16 which contain corresponding pistons 28. It is clear that the hydraulic fluid from the source of oil pressure is connected to generate the first and second forces with hydraulic fluid acting on the pistons of the first and second elements, and includes a first flow path extending to pistons in the first element and a second flow path extending to pistons in the second element, since there must be two flowpaths to each of the pistons in the first and second elements for the assembly to operate. Further, the third to last paragraph indicates that there is a first hydraulic piston element which exerts the first force in the first direction and a second hydraulic piston element to exert the second force in the second direction. Concerning claim 14, which recites that the piston chambers in different elements are hydraulically connectable to one another through a control valve selectively connecting the first flow path to the second flow path, this is recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the

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prior art structure is capable of performing the intended use, then it meets the claim. The piston chambers are fluidically connected to one another via ring channel 44. Each hydraulic piston element is of annular design. When the system is assembled on the rotor, the at least one restrictor limits the displacement speed of the rotor only in the event of a fault, due to the structural similarity to Applicant's disclosed restrictor arrangement. The recitation in claim 11, lines 1-2 of "for axially mounting a rotor of a gas turbine" is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Kashima 4,955,730 (figures 1-3). Disclosed is a shaft bearing system for axially mounting a rotor 2, comprising: a rotationally fixed bearing body 1/3/4/54/55 that has first and second hydraulic piston arrangements 12, 13, formed separately from one another at opposing positions along the bearing body, each for axially displacing the rotor in a different direction and between a first operating position and a second operating position; and a hydraulic system 60, 66 fluidically connected by a fluid flow path (the passages 27, 29, and unnumbered passage connecting 27 and 29 together) to both of the hydraulic piston arrangements, to generate forces for displacing the rotor in each of the different directions, wherein to limit the displacement speed of the rotor, restrictors 26A, 28A are arranged in the fluid flow path between the hydraulic piston arrangements. The recitation in claim 19, line 1 of "for axially mounting a rotor of a gas turbine" is a recitation of intended use.

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A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing use, then it meets the claim. The recitation in claim 19, the last three lines that the hydraulic system and the two hydraulic piston arrangements are fluidically connectable to one another through a 4/2-way directional control valve is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing use, then it meets the claim. The shaft bearing system of Kashima is formed such that the two hydraulic piston arrangements are fluidically connectable to one another through a 4/2-way directional control valve.

Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Swearingen 3,828,610 (figure 1). Disclosed is a gas turbine (column 10, lines 5-10 and noting that the turbine is operable in air, thus being a gas turbine) having a bearing positioned to support a rotor 11, comprising a rotationally fixed bearing body 12/13 that has a hydraulic piston arrangement 14/24, 15/25 for axially displacing the rotor from a first operating position into a second operating position, and a hydraulic system 18, 19, 16, 17 fluidically connected by a fluid flow path to the hydraulic piston arrangement, wherein to limit the displacement speed of the rotor, restrictors 12b, 13b or 22, 23 are arranged in fluid flow path between the hydraulic piston arrangement and the hydraulic system.



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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent 39 26 556 in view of Tardy 4,470,339. The German Patent 39 26 556 discloses a shaft bearing assembly substantially as claimed as set forth above, but does not disclose each restrictor being formed with a flow control valve (claim 13), and does not disclose a first flow control valve positioned in the first flow path and a second flow control valve positioned in the second flow path, the flow control valves each serving to limit the admissible displacement speed of the rotor during an intended displacement (claim 18).

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Tardy teaches that a piston (unnumbered, inside cylinder 3) may have a restrictor 5/7 formed with a flow control valve 4, for the purpose of controlling flow to the piston.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the shaft bearing assembly of German Patent 39 26 556 such that each restrictor includes a flow control valve, and such that a first flow control valve is positioned in the first flow path and a second flow control valve is positioned in the second flow path. Concerning the recitations of each restrictor being formed with a flow control valve, and the first flow control valve positioned in the first flow path and the second flow control valve positioned in the second flow path, these are duplications of a known part for a known function. It would have been obvious to provide each restrictor of German Patent 39 26 556 with a flow control valve as a duplication of a known part for a known function, since it has been held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Note that this modification inherently would result in the flow control valves each serving to limit the admissible displacement speed of the rotor during an intended displacement. When the system is assembled on the rotor, the restrictors limit the displacement speed of the rotor only in the event of a fault, due to the structural similarity to Applicant's disclosed restrictor arrangement.

Claims 11-12 and 14-17 are also rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent 39 26 556 in view of Reichert 2002/0009361. German Patent 39 26 556 discloses a shaft bearing assembly 10 for axially mounting a rotor 2 and for selective movement

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of the rotor along a thrust axis of the rotor substantially as claimed, comprising a bearing body 12/14 having first and second opposing track sides (the left and right sides), the first track side positionable along the axis and adjacent a first stop surface (near 20) on the rotor to transfer a first force in a first direction along the thrust axis, the second track side positionable along the axis and adjacent a second stop surface (analogous to 20 on the right side of the rotor) on the rotor to transfer a second force in a second direction along the thrust axis, the second direction being opposite the first direction, a first hydraulic piston element 28 positionable in the bearing body to exert the first force in the first direction and against the first stop surface, a second hydraulic piston element 28 positionable in the bearing body to exert the second force in the second direction and against the second stop surface (note that pistons are provided on both the left and right sides), the first and second elements each comprising a plurality of hydraulic pistons, each piston operatively positioned in a piston chamber 32 to effect one of the first or second forces, operation of the first and second elements enabling displacement of the rotor along the first or second direction from a first operating position into a second operating position, a hydraulic system (not shown) connected to generate the first and second forces with hydraulic fluid acting on the pistons of the first and second elements, the hydraulic system including a first flowpath extending to pistons in the first element, wherein to limit displacement speed of the rotor, restrictors 40 are positioned in the first flow path. There also restrictors 40 provided for the second piston elements. Noting the ninth paragraph of the partial English translation of DE 3,926,556, a source of oil pressure is provided. The third to last paragraph indicates that there are shoes 118 on the opposite side of surface 8 with corresponding piston cylinder units 16 which contain corresponding pistons 28. It is clear that the hydraulic fluid from the source of oil

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pressure is connected to generate the first and second forces with hydraulic fluid acting on the pistons of the first and second elements, and includes a first flow path extending to pistons in the first element. Further, the third to last paragraph indicates that there is a first hydraulic piston element which exerts the first force in the first direction and a second hydraulic piston element to exert the second force in the second direction. The piston chambers are fluidically connected to one another via ring channel 44. Each hydraulic piston element is of annular design. When the system is assembled on the rotor, the at least one restrictor limits the displacement speed of the rotor only in the event of a fault, due to the structural similarity to Applicant's disclosed restrictor arrangement. The recitation in claim 11, lines 1-2 of "for axially mounting a rotor of a gas turbine" is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

However, the German Patent does not explicitly disclose the hydraulic system including a second flow path extending to the pistons in the second element (claim 11).

Reichert (figures 2-3) shows a gas turbine having a bearing positioned to support a rotor 2, comprising a rotationally fixed bearing body 1 that has a hydraulic piston arrangement 4, 5 for axially displacing the rotor from a first operating position into a second operating position, and a hydraulic system 12 fluidically connected by a fluid flow path to the hydraulic piston arrangement. The hydraulic system includes a first flowpath 16 extending to a first piston 4 and

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a second flow path 16 extending to a second piston 5. The arrangement is provided for the purpose of providing compactness and simplicity for providing hydraulic fluid to the first and second pistons.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the shaft bearing assembly of German Patent 39 26 556 such that the hydraulic system includes a second flow path extending to the pistons in the second element, as taught by Reichert, for the purpose of providing compactness and simplicity for providing hydraulic fluid to the first and second pistons. This modification would inherently result in restrictor 40 formed in the second flow path forming a flow constriction in the second flow path. Concerning claim 14, which recites that the piston chambers in different elements are hydraulically connectable to one another through a control valve selectively connecting the first flow path to the second flow path, this is recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Claims 13 and 18 are also rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent 39 26 556 and Reichert 2002/0009361 as applied to claim 12 above, and further in view of Tardy 4,470,339. The modified shaft bearing assembly of German Patent 39 26 556 shows all of the claimed subject matter except for each restrictor being formed with a flow control valve (claim 13), and except for a first flow control valve positioned in the first flow path

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and a second flow control valve positioned in the second flow path, the flow control valves each serving to limit the admissible displacement speed of the rotor during an intended displacement (claim 18).

Tardy teaches that a piston (unnumbered, inside cylinder 3) may have a restrictor 5/7 formed with a flow control valve 4, for the purpose of controlling flow to the piston.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified shaft bearing assembly of German Patent 39 26 556 such that each restrictor includes a flow control valve, and such that a first flow control valve is positioned in the first flow path and a second flow control valve is positioned in the second flow path. Concerning the recitations of each restrictor being formed with a flow control valve, and the first flow control valve positioned in the first flow path and the second flow control valve positioned in the second flow path, these are duplications of a known part for a known function. It would have been obvious to provide each restrictor of German Patent 39 26 556 with a flow control valve as a duplication of a known part for a known function, since it has been held that held mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Note that this modification inherently would result in the flow control valves each serving to limit the admissible displacement speed of the rotor during an intended displacement. When the system is assembled on the rotor, the restrictors limit the displacement speed of the rotor only in the event of a fault, due to the structural similarity to Applicant's disclosed restrictor arrangement.

Claim 19 is also rejected under 35 U.S.C. 103(a) as being unpatentable over Arvidsson 4,915,510 in view of German Patent 39 26 556 and Applicant's Admitted Prior Art. Arvidsson discloses a shaft bearing system for axially mounting a rotor 1 of a gas turbine, comprising a rotationally fixed bearing body 12, 13 that has first and second hydraulic piston arrangements 2, 3 formed separately from one another at opposing positions along the bearing body, each for axially displacing the rotor in a different direction and between a first operating position and a second operating position, and a hydraulic system 4-9 fluidically connected by a fluid flow path through valve 8 to both of the hydraulic piston arrangements, to generate forces for displacing the rotor in each of the different directions.

However, Arvidsson does not disclose that to limit the displacement speed of the rotor, at least one restrictor is arranged in the fluid flow path between the hydraulic piston arrangement and the hydraulic system, and does not disclose that the directional control valve is a 4/2-way directional control valve.

German Patent 39 26 556 shows a bearing 10 for axially mounting a rotor 2 of a gas turbine, comprising a rotationally fixed bearing body 12/14 that has a hydraulic piston arrangement 16 for axially displacing the rotor from a first operating position into a second operating position, and a hydraulic system (unnumbered, connected at 44 to a source of oil pressure) fluidically connected to the hydraulic piston arrangement, wherein to limit the

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displacement speed of the rotor, restrictors 40 are arranged in a fluid flow path between the hydraulic piston arrangement and the hydraulic system.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the bearing body of Arvidsson with at least one restrictor is arranged in the fluid flow path between the hydraulic piston arrangement and the hydraulic system, as taught by German Patent 39 26 556, for the purpose of limiting the displacement speed of the rotor.

With regard to the recitation of the directional control valve being a 4/2-way directional control valve, Official Notice was taken in the first Office action that the use of 4/2-way directional control valves are well-known in the art of hydraulic systems, for the purpose of providing communication between two fluid motors (pistons). Applicant did not traverse the examiner's assertion of official notice. Pursuant to MPEP 2144.03, the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant failed to traverse the examiner's assertion of official notice.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified bearing body of Arvidsson such that the directional control valve is a 4/2-way directional control valve, as taught by Applicant's Admitted Prior Art, for the purpose of providing communication between the two fluid pistons.



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The recitation in claim 19, line 1 of “for axially mounting a rotor of a gas turbine” is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing use, then it meets the claim.

Claim 19 is also rejected under 35 U.S.C. 103(a) as being unpatentable over Arvidsson 4,915,510 in view of German Patent 39 26 556. Arvidsson discloses a shaft bearing system for axially mounting a rotor 1 of a gas turbine, comprising a rotationally fixed bearing body 12, 13 that has first and second hydraulic piston arrangements 2, 3 formed separately from one another at opposing positions along the bearing body, each for axially displacing the rotor in a different direction and between a first operating position and a second operating position, and a hydraulic system 4-9 fluidically connected by a fluid flow path through valve 8 to both of the hydraulic piston arrangements, to generate forces for displacing the rotor in each of the different directions.

However, Arvidsson does not disclose that to limit the displacement speed of the rotor, at least one restrictor is arranged in the fluid flow path between the hydraulic piston arrangement and the hydraulic system.

German Patent 39 26 556 shows a bearing 10 for axially mounting a rotor 2 of a gas turbine, comprising a rotationally fixed bearing body 12/14 that has a hydraulic piston arrangement 16 for axially displacing the rotor from a first operating position into a second

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operating position, and a hydraulic system (unnumbered, connected at 44 to a source of oil pressure) fluidically connected to the hydraulic piston arrangement, wherein to limit the displacement speed of the rotor, restrictors 40 are arranged in a fluid flow path between the hydraulic piston arrangement and the hydraulic system.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the bearing body of Arvidsson with at least one restrictor is arranged in the fluid flow path between the hydraulic piston arrangement and the hydraulic system, as taught by German Patent 39 26 556, for the purpose of limiting the displacement speed of the rotor. Concerning the recitation in claim 19, lines 10-12 that the two hydraulic piston arrangements are fluidically connectable to one another through a 4/2-way directional control valve, this is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing use, then it meets the claim. The modified shaft bearing system of Arvidsson is formed such that the two hydraulic piston arrangements are fluidically connectable to one another through a 4/2-way directional control valve.

Claim 20 is also rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert 2002/0009361 in view of German Patent 39 26 556. Reichert (figure 3) discloses a gas turbine having a bearing positioned to support a rotor 2, comprising a rotationally fixed bearing body 1 that has a hydraulic piston arrangement 4, 5 for axially displacing the rotor from a first operating

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position into a second operating position, and a hydraulic system 12 fluidically connected by a fluid flow path to the hydraulic piston arrangement.

However, Reichert does not disclose that to limit the displacement speed of the rotor, at least one restrictor is arranged in the fluid flow path between the hydraulic piston arrangement and the hydraulic system.

German Patent 39 26 556 shows a bearing 10 for axially mounting a rotor 2 of a gas turbine, comprising a rotationally fixed bearing body 12/14 that has a hydraulic piston arrangement 16 for axially displacing the rotor from a first operating position into a second operating position, and a hydraulic system (unnumbered, connected at 44 to a source of oil pressure) fluidically connected to the hydraulic piston arrangement, wherein to limit the displacement speed of the rotor, restrictors 40 are arranged in a fluid flow path between the hydraulic piston arrangement and the hydraulic system.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the bearing body of Arvidsson with at least one restrictor is arranged in the fluid flow path between the hydraulic piston arrangement and the hydraulic system, as taught by German Patent 39 26 556, for the purpose of limiting the displacement speed of the rotor.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Verdier/  
Primary Examiner, Art Unit 3745

Christopher Verdier  
Primary Examiner  
Art Unit 3745